Taking Laptops Schoolwide: A Professional

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If your students are doing amazing things in the classroom with laptops, and you would like to share what you're doing without forcing it on others—or taking a great deal of your own time—consider using a collaborative approach.

As researchers of tech implementation, we have conducted multiple evaluations of one-to-one laptop programs. Our latest district-level evaluation paid specific attention to the progression of laptop use across grade levels. What struck us was how some schools seamlessly integrated laptops for learning, but others did not. We wondered why such a difference existed among schools in the same districts. What we found was that successful schools had a clearly defined scope and sequence for how students were to use laptops, and teacher collaboration was readily apparent.

Student Use and Teacher Collaboration

Schools where technology was truly ubiquitous across multiple grade levels had a plan in place that outlined the software in use along with the technology skills students were learning. We found an obvious progression of laptop use that helped students build on skills learned in previous grade levels rather than simply using the laptops in the same manner year after year. For example, at schools where the initiative extended across several grade levels, students reported using programs such as AppleWorks and Pages for basic word processing in the younger grades and more advanced features, such as importing images and special effects, in the higher grades. This was also true for schools with the one-to-one ratio only in the upper grades. In these schools, the students had already learned the basic applications in the primary grades through their use of laptop carts.

We also found that teacher collaboration was obvious at those schools. In one school, where the laptop program was integral to the gifted and talented education (GATE) combination (third/fourth grade and fifth/sixth grade) classes, GATE teachers had collaboratively developed a system in

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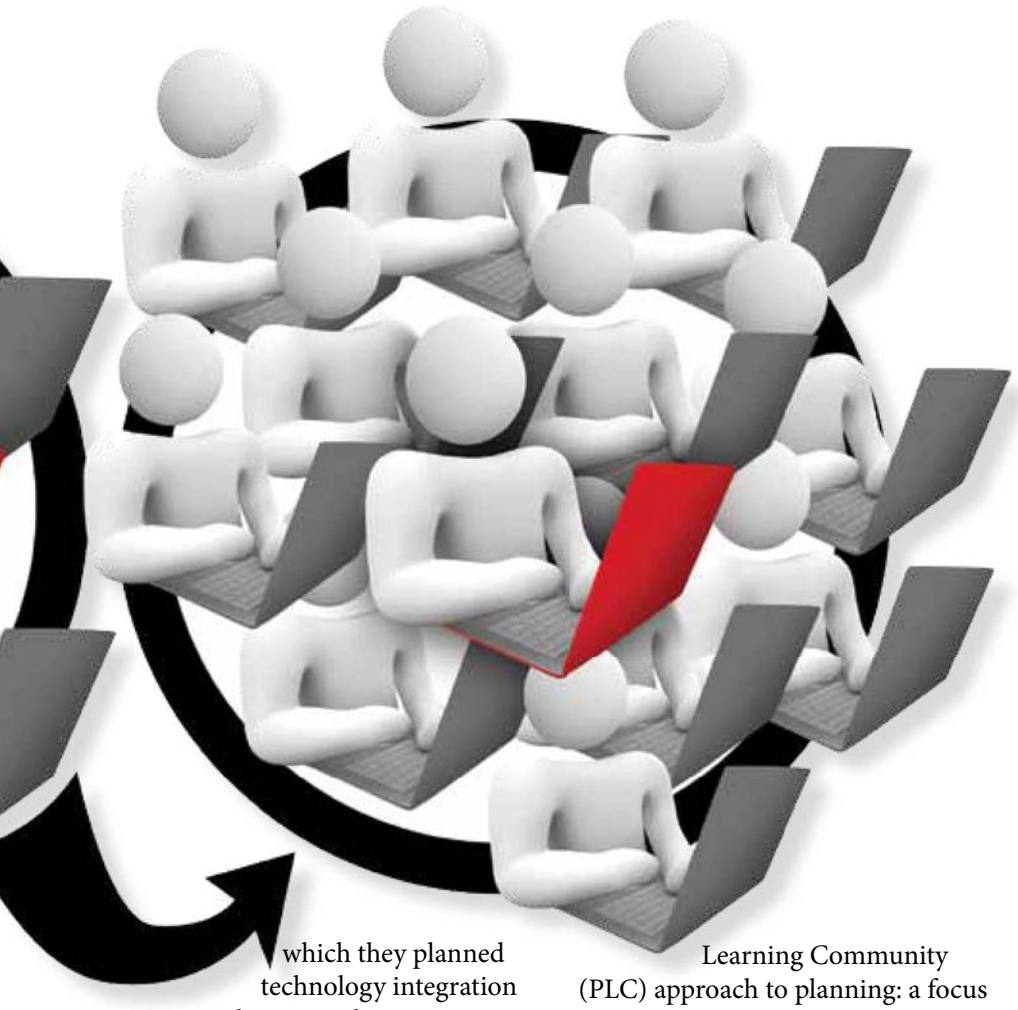
Learning Community Approach



which they planned technology integration into the curriculum. For example, the third/fourth grade teacher trained his students to use specific technologies. He communicated this to the fifth/sixth grade teachers, so they knew that the incoming fifth graders from his classroom would not need application instruction. Overall, we found that teacher collaboration took multiple forms but played an important role in the successful implementation at the district level.

A PLC Approach

What brought about collaboration in the example above? The district adopted Richard DuFour's Professional Learning Community (PLC) approach to planning: a focus on learning rather than teaching, working collaboratively, and holding one's self accountable for results.

Where a one-to-one initiative was successful at the district level, teachers met weekly as a grade-level team to share student data, reflect on student progress, and plan learning experiences. Collaboration was part of the culture, and that led to laptop implementation throughout the curriculum following a distinct plan.

Currently in its fifth year, the Laptops for Learning Program in the Fullerton (California) School District (K–8) provides students at six of the district's 20 schools with an Apple iBook laptop. The program involves second through eighth grade in one school, third through sixth in another, sixth grade only in two schools, and six through seventh in the district's two middle schools.

Kim Bass, a second grade teacher, took part in her school's implementation of a PLC approach. Each week, her second grade team, like all grade-level teams, met to share student data and decide how they could improve student learning and instruction. They set up norms to help them stay on track and on schedule.

During one meeting, her team shared information about math lessons that focused on telling time to the quarter hour. From their discussion about a set of math assignments, they discovered that most of their second graders were struggling with this standard. One team member reviewed the school's website to see which math activities the students should visit to practice this skill. Others logged on to alternate math websites they use. They discovered that many students who were struggling with the concept had spent little time working on this skill.

"As a team, we decided to assign these sites as homework until this skill was mastered," she said. "Additionally, we identified that some of our students were also unclear about the difference between a.m. and p.m. The team concluded that a project in Kidpix showing different activities that take place during a.m. and p.m. would be a great extension project for students who did not need direct practice telling time to the quarter hour."

Four Factors to Consider

A defined collaboration, such as a PLC, can help expand your one-to-one program. To start a collaborative approach, consider these four factors

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at your school: school climate, communication, collaboration, and progression of use.

School climate. Does your school have a climate that encourages innovation? Does your school have a core group of teachers already using laptops? If not, start small and then expand once others see the relative advantage of the innovation. Are your administrators, parents, and community supportive and actively involved? Supportive administrators and enthusiastic teachers can present a unified front to promote the expansion of the initiative. During our evaluation, we observed very different school climates. The most successful schools had administrators and parents who were supportive and involved. The support created a climate where teachers had the freedom to integrate laptops and other technologies in innovative ways. The laptops in these schools have become an integral and natural part of the teaching and learning process across content areas.

Communication. Is there a misconception of what the laptop program is, how it operates, and what educational results can be achieved (higher test scores, 21st-century skills) as a direct result of laptop use? If so, planned and ongoing communication can keep colleagues, administrators, parents, and the greater community informed. This will help others be engaged and supportive of your program. It will also allow the laptop program to do what you designed it to do—extend learning from the classroom to the home and beyond. In a time when many are wary of Internet use, open communication can help ease some of the fears about technology. A classroom webpage is a great way to communicate about the program (even to colleagues). A webpage with links to sites used during the school day will extend the learning, showcase student work, and involve parents and the community. Use every means possible to share the great things happening with your program.

Collaboration. What type of collaboration is currently happening at your school? Is it informal, or is it more formal, such as a common preparation period? A defined collaborative approach is crucial for helping build an ethos of sharing that leads to successful laptop integration. If your collaboration is informal, start a wiki or use another Web-based tool to share ideas, websites, and electronic materials. Work toward a more formal collaborative approach. Teachers engaging in a PLC can use this time to address common goals and share how to use laptops to meet student needs. They can also use PLC planning time for professional development.

Progression of use. Does your school have a plan that outlines how students will be using laptops throughout a school year and from grade to grade? This type of document can provide structure, serve as a communication tool, and support a shared vision of a laptop program. Many districts have a technology plan in place that can provide guidance in the development of such a document. You should also use ISTE's NETS for Students as a guide when drafting this document. You can find a chart to help with the planning process at http://groups.google.com/group/1-to-1-computing-initiatives.

We realize that every school's context is different. Despite these differences, each school will work through the same issues as it moves to a collaborative environment where innovation adoption can occur. Helping your school move to this environment may seem like a daunting task. Do not underestimate one enthusiastic and dedicated teacher's power to transform a one-to-one initiative from a single classroom into a successful schoolwide program.

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